CLAIMS

What is claimed is

- 1. A protein or a salt thereof, which (i) belongs to a member of MMPs having the activation capability of pro MMP-2, (ii) has an activity identical with or substantially equivalent to naturally-occurring MT-MMP, and (iii) is a pro MMP-2 activating factor, excluding MT-MMP-1.
- 2. The protein according to Claim 1, wherein the protein has a biological property or primary structural conformation identical with or substantially equivalent to that of native MT-MMP-3 or a salt thereof.
- 3. The protein according to Claim 1 or Claim 2, wherein a C-terminal area of the protein has (i) an amino acid sequence from Ala to Phe in the sequence represented by SEQ ID NO: 2 in the Sequence Listing or (ii) an amino acid sequence substantially equivalent thereto.
- 4. The protein according to any of Claims 1 to 3, wherein the protein is MT-MMP-3 or a salt thereof which has (i) an amino acid sequence represented by SEQ ID NO: 2 in the Sequence Listing or (ii) an amino acid sequence equivalent thereto.
- 5. The protein according to any of Claims 1 to 4, wherein the protein is the product of prokaryotic or eukaryotic expression of an exogenous DNA sequence.
- 6. The protein according to any of Claims 1 to 5, wherein the protein has (i) the amino acid sequence of SEQ ID NO: 2 in the Sequence Listing or (ii) the substantially same amino acid sequence.
- 7. A partial peptide of the protein according to any of Claims 1 to 6 or a salt thereof .
- 8. A nucleic acid comprising a nucleotide sequence coding for the protein or the partial peptide according to any of Claims 1 to 7.
- 9. The nucleic acid according to Chaim 8, which is a DNA gene having a nucleotide sequence coding for MT-MMP-3 according to any of Claims 2 to 4.
 - 10. The nucleic acid according to Claim 8 or 9,

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having (i) an open reading frame region of the nucleotide sequence represented by SEQ ID NO: 1 in the Sequence Listing or (ii) a nucleotide sequence having an activity substantially equivalent thereto.

- 11. A vector comprising the nucleic acid according to any of Claims 8 to 10. $\dot{}$
- 12. A transformant or transfectant harboring (i) the nucleic acid according to an of of Claims 8 to 10 or (ii) the vector according to Claim 11.
- 13. A process for producing the protein according to any of Claims 1 to 6 or a partial peptide thereof, which comprises:
 - '(i) culturing the transformant or transfectant according to Claim 12 in a nutrient medium capable of growing said transformant or transfectant, and
 - (ii) producing, as a recombinant species, the protein according to any of Claims 1 to 6 or a partial peptide thereof, including MT-MMP-3 or a salt thereof;
- 14. An antibody against (a) a protein or a salt thereof which (i) belongs to a member of MMPs having the activation capability of pro MMP-2, (ii) has an activity identical with or substantially equivalent to naturally-occurring MT-MMP, and (iii) is a pro MMP-2 activating factor, excluding MT-MMP-1, or (b) a partial peptide of said protein or a salt thereof.
- 15. The antibody according to Claim 14, wherein the antibody is against the protein which has an activity or a primary structural conformation identical with or substantially equivalent to that of MT-MMP-3 or a salt thereof.
- wherein the antibody is against the protein that is MT-MMP-3 or a salt thereof having (i) an amino acid sequence represented by SEQ ID NO: 2 in the Sequence Listing or (ii) an amino acid sequence substantially equivalent thereto.
- A 17. The antibody according to any of Claims 14 to A 16; wherein the antibody is against the protein which is a product obtained by expressing a foreign DNA sequence in

prokaryotes or eukaryotes.

A 18. The antibody according to any of Claims 14 to.

A 17, wherein the antibody is against the protein which has (i) the amino acid sequence of SEQ ID NO: 2 in the Sequence Listing or (ii) the substantially same amino acid sequence.

A 19. The antibody according to any of claims 14 to 4 18, wherein the antibody is against a partial peptide of the protein or a salt thereof.

protein or a salt thereof.

20. The antibody according to any of Claims 14 to A 19, wherein the antibody is anti-serum.

Claim 14

A 19, wherein the antibody is anti-serum.

21. The antibody according to any of claims 14 to A 19, wherein the antibody is monoclonal.

A 19, wherein the antibody is monoclonal.

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A 19 and 21, which is a monoclonal antibody against MT-MMP-3

or a salt thereof.

a protein or a salt thereof which (i) belongs to a member of MMPs having the activation capability of pro MMP-2, (ii) has an activity identical with or substantially equivalent to naturally-occurring MT-MMP, and (iii) is a pro MMP-2 activating factor, excluding MT-MMP-1, or (b) a partial peptide of said protein or a salt thereof, which comprises employing an antigen selected from the group consisting of said protein, said partial peptide and a salt thereof to raise the antibody thereagainst.

24. A method for producing the antibody according to Claim 21 or 22, which comprises

(A) fusing an antibody-producing cell obtained from an immunized animal with an immortal cell, wherein said antibody is against (a) a protein or a salt thereof which (i) belongs to a member of MMPs having the activation capability of pro MMP-2, (ii) has an activity identical with or substantially equivalent to naturally-occurring MT-MMP, and (iii) is a pro MMP-2 activating factor, excluding MT-MMP-1, or (b) a partial peptide of said protein or a salt thereof and said animal is immunized with the protein, the partial peptide or a salt thereof, and

- (B) selecting an immortal hybrid cell capable of an antibody against a protein including MT-MMP-3.
- 25. A method for detecting and/or measuring MT-MMP-3, which comprises using (A) a reagent selected from the group consisting of (a) a protein or a salt thereof which (i) belongs to a member of MMPs having the activation capability of pro MMP-2, (ii) has an activity identical with or substantially equivalent to naturally-occurring MT-MMP, and (iii) is a pro MMP-2 activating factor ϕ (b) a partial peptide of said protein or a salt thereof, or (B) a reagent selected from the group consisting of the antibodies according to any
 - A labeled antibody against MT-MMP-3 for the method for detecting and/or measuring MT-MMP-3 (the detection and/or measurement of MT-MMP-3) according to Claim 25.
 - A labeled protein or a salt thereof, for the method for detecting and \sim r measuring MT-MMP-3 according to Claim 25, wherein said labeled protein (i) belongs to a member of MMPs having the activation capability of pro MMP-2, (ii) has an activity identical with o^{\downarrow} substantially equivalent to naturally-occurring MT-MMP, and (iii) is a pro MMP-2 activating factor, excluding MT-MMP-1, or labeled partial peptide of said protein or a salt thereof, for the method according to Claim 25.
 - A labeled nucleic acid for detection and/or measurement of MT-MMP-3 expressing cells and/or tissues, wherein said nucleic acid encodes (A) a protein which (i) belongs to a member of MMPs having the activation capability of pro MMP-2, (ii) has an activity identical with or substantially equivalent to naturally-occurring MT-MMP, and (iii) is a pro MMP-2 activating factor, excluding $N_{T-MMP-1}$, or (B) a partial peptide of said protein.
 - 29. A nucleic acid according to\Claim 28, which is a probe for hybridization.

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